

REMARKS

Pending Claims

Claims 1-8, 10-29, 49 and 50 remain pending in the application. Claims 1, 8, 10, and 21 have been amended. Support for the amendments can be found throughout the specification, for example, pages 4, 19-21, 23, 24, 26 and Figures 2, 4, and 21. Thus, these amendments do not constitute new matter.

Provisional Double Patenting Rejections

The Examiner has provisionally rejected Claims 1-8, 10-29, 49 and 50 on the ground of nonstatutory obviousness-type double patenting in light of Claims 1-6 of co-pending application no. 10/620,312 ("the '312 application"). As set forth below, the applicant's believe all other rejections made by the Examiner are overcome with this amendment. In accordance with M.P.E.P. 804(I)(B)(1), and as this application is the earlier filed of the two applications that the Examiner cites as conflicting, the applicants respectfully request that the Examiner's provisional double patenting rejection be withdrawn. Should a double patenting rejection continue to be made in the later filed application, it will be addressed at that time.

Rejections under § 112 ¶ 1

The Examiner rejected Claims 1-8, 10-29, 49 and 50 under 35 U.S.C. § 112 ¶ 1. The Examiner stated that "because the specification [of the present application] while being enabling for a method claimed where the field strength is 0.2% of the mean, does not reasonably provide enablement for a method claimed where the field strength is greater than 0.2% of the mean. . . . [T]he specification teaches that [an] electric field strength [] greater than 0.2% of the mean is enabled [], whereas the electric field of 10% of the mean is not acceptable." More specifically, the Examiner states that "the specification [of the instant application] teaches that the electric field strength [] greater than 0.2% is enabled (page 97 of the specification) whereas the electric field of 10% [or greater] of the mean is not acceptable (page 96, line 10 of the specification.)"

Applicants agree that the specification teaches that relatively uniform fields are desirable in practicing the invention. In this regard, the application defines "uniform electric field" as an

electric field that is within 15% of the mean at all points within an area of observation at any given time. However, the Examiner is misreading the specification when concluding that the specification does not provide enablement for deviations greater than 0.2% of the mean. Examples 1 and 3 through 6 illustrate electrode and well configurations that produce a "uniform electric field" as defined in the specification. In Example 1, the maximum and minimum fields within the area of observation are within about 10% of the mean. In examples 4 and 5, the maximum and minimum fields within the area of observation are within about 1% of the mean. In Example 3, the maximum and minimum fields within the area of observation are within about 0.12% of the mean. Thus, the specification provides explicit and specific disclosure of systems producing a variety of different field uniformities suitable for use in the claimed systems and methods. Applicants thus respectfully submit that the claims are enabled by the disclosure provided in the specification and request withdrawal of the Examiner's rejection of the claims for lack of enablement.

Rejection of Claims under § 102(b)

The Examiner has made a rejection under 35 U.S.C. § 102(b) based on Sinha et al. (1995).

As discussed in the interview, nowhere does Sinha disclose a repetitive application of electric fields that "effect a change in transmembrane potential in [] one or more cells . . . predominantly in a single direction away from a starting transmembrane potential over the course of said series of electric fields due to a continuing and additive accumulation of charge in said cells over the course of said series of electric fields" as set forth in independent Claims 1 and 21. In fact, prior to the disclosure of the present application it was unknown in the art that a repetitive application of a series of electric pulses could effect a change in transmembrane potential due to a continuing and additive accumulation of charge in said cell over the course of said series of electric fields." In contrast, Sinha teaches stimulating hippocampal cells with pulsed electric field potentials producing transmembrane potential changes that rapidly decay after each pulse. This is shown in the top right trace of Figure 4B in Sinha where the transmembrane potential is seen to decay back to the original value between the two applied pulses.

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The applicants' were also the first to recognize that this discovery has advantageous application in high throughput drug candidate screening. Independent Claims 1 and 21 have now been amended to include limitations related to the use of this discovery in the high throughput drug screening process. Thus, even if Sinha were considered by the Examiner to implicitly or inherently fulfill the claim limitations regarding transmembrane potential, no suggestion to apply this in drug discovery is provided by the Sinha or any other references of record. For at least the reasons discussed above, amended Claims 1 and 21 are not anticipated nor rendered obvious by Sinha alone or in combination with any other references of record. Applicants thus respectfully request that the Examiner's rejection of amended Claims 1 and 21 and the claims dependent therefrom be withdrawn.


CONCLUSION

The Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of these remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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